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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,030	10/12/2004	Shinji Seto	Swan Case 803	8690

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EXAMINER

BRINEY III, WALTER F

ART UNIT	PAPER NUMBER
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2646

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/511,030	Applicant(s) SETO, SHINJI	
	Examiner Walter F. Briney III	Art Unit 2646	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-11 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 11 is/are allowed.
6) ☒ Claim(s) 3 and 5-10 is/are rejected.
7) ☒ Claim(s) 4 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 22 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claims 3 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leight (US Patent 6,241,041) in view of Aceti (US Patent 5,979,589).**

Claim 10 is limited to "an ear pad adapted to being inserted and detachably set in an auditory meatus." Leight discloses a multi-cone earplug and method of forming and using. See Abstract. A perspective of the earplug disclosed by Leight is seen in figure 1, and clearly comprises three cone elements 20, 22 and 24 attached to a stem 12. Figures 4, 5 and 7 depict the shape of the earplug as it is "inserted" and removed, which evidences that the earplug is "detachably set in an auditory meatus." Figure 2 depicts a cross-section of the earplug. Pictorially, the stem clearly corresponds to the "cylindrical basic body" and the cones correspond to the "gathered sound-insulating walls." See column 2, line 56-60, indicates that the stem and cones are "monolithically formed" of the same "elastic material." Figure 2 also depicts that the cones are fixed in place with respect to the stem, such that they are provided at "predetermined intervals in the axial direction." As seen in figure 8, the cones vary in width. Specifically, the thickness H at the outer periphery of a cone is less than that near the base, such that each cone "has a thickness that reduces toward the outer periphery thereof." Figure 5

depicts that each cone makes contact with a wall of an auditory meatus at a forward point from which the remaining cone periphery bends backwards, such that each cone "contacts the upper surface of an auditory meatus and bends backwards toward the rear of the basic body." As each cone contacts a portion of the auditory meatus, a new "sealed space" is formed. Given the exemplary dimensions for the earplug disclosed by Leight in column 4, lines 39-56, the fact that the average human auditory meatus is 7mm, and the disclosure that the cones of Leight deform in the manner depicted in figure 5 it is inherent that the "sealed spaces" formed by the cones of Leight "are formed for attenuating outside noises by bent [cones] which overlap and adjoin an adjacent [cone] at outer peripheral edges thereof when the ear pad is placed in the auditory meatus." It is noted that Leight simply does not disclose a "hollow cylindrical basic body." However, this deficiency is overcome by an obvious modification.

In particular, it is known to provide venting within an earplug, such as the one disclosed by Leight. Aceti evidences the knowledge of venting and its applications to earplugs. See column 3, lines 21-28. Aceti specifically teaches that venting provides intentional sound leakage to relieve pressure. Aceti even depicts a vent/canal 24 in the sole figure thereof. As seen, the vent is provided by hollowing out the "cylindrical basic body" of an earplug.

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide venting as taught by Aceti for the purpose of relieving feelings of pressure when using earplugs.

Claim 3 is limited to “the ear pad according to claim 10,” as covered by Leight in view of Aceti. Figure 3 of Leight clearly depicts that each cone “decreases in diameter toward the front” of the earplug. Therefore, Leight in view of Aceti makes obvious all limitations of the claim.

Claim 6 is limited to “the ear pad according to claim 10,” as covered by Leight in view of Aceti. Placing the earplug disclosed by Leight into an auditory meatus will cause the cones to inherently trap “air bubbles” between them. Therefore, Leight in view of Aceti makes obvious all limitations of the claim.

Claim 7 is limited to “the ear pad according to claim 10,” as covered by Leight in view of Aceti. Leight discloses that the largest cone diameter is twice that of the basic body at its widest point (14mm v. 7mm). When inserted into an auditory meatus, the widest cone diameter will be reduced below 14mm, and thus, will be “smaller than two times of the outer diameter of the basic body.” Therefore, Leight in view of Aceti makes obvious all limitations of the claim.

Claim 8 is limited to “the ear pad according to claim 10,” as covered by Leight in view of Aceti. Neither Leight nor Aceti teach the use of between five and ten “walls.” While the use of five to ten walls has been established in the prior art (see Santi), there is no motivation to modify either Leight or Aceti. However, mere duplication of parts is considered obvious where no new and unexpected result is produced. See *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

Therefore, it would have been obvious to one of ordinary skill in the art to include between five and ten walls because the function of five and ten walls is not new and unexpected in view of the function of three walls.

Claim 9 is limited to “an earphone having the ear pad according to claim 10,” as covered by Leight in view of Aceti. This claim appears to be written in independent form, but because of its reference to claim 10, it actually depends from claim 10. As such, the claimed use of the ear pad of claim 10 with an earphone does not structurally or patentably limit said ear pad. Therefore, Leight in view of Aceti makes obvious all limitations of the claim.

2. **Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aceti in view of Leight.**

Claim 10 is limited to “an ear pad adapted to being inserted and detachably set in an auditory meatus.” Aceti teaches a flexible hearing aid. See Abstract. Aceti generally depicts a hearing aid with a “hollow and cylindrical basic body made of an elastic material” 12 with a “number of gathered sound-insulating walls 16 made of the same material as the basic body and monolithically annularly provided on the basic body at predetermined intervals in the axial direction.” See column 2, lines 33-44. A number of constructional details are left out of Aceti’s disclosure. In particular, Aceti does not disclose the dimensions of the hearing aid or the cross-section of the cones 16. Therefore, Aceti fails to anticipate the “thickness” property of the recited “walls” and the formation of the recited “sealed spaces.” However, these deficiencies are overcome by an obvious modification.

In particular, the gaps of Aceti's disclosure can be overcome by known hearing aid construction methods. To this end, Leight teaches an earplug comprising a plurality of conical sections, such as those disclosed by Aceti. Leight teaches the general dimensions and happens to teach that conical walls deform to form the recited "sealed spaces." See the rejection of claim 10.

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize known hearing aid construction methods to fill-in the gaps of Aceti's disclosure for the purpose of realizing a useable hearing aid.

Claim 5 is limited to "the ear pad according to claim 10," as covered by Aceti in view of Leight. Aceti discloses that "each cone has the same diameter," and is "slightly slanted backwards." Therefore, Aceti in view of Leight makes obvious all limitations of the claim.

Allowable Subject Matter

The following is a statement of reasons for the indication of allowable subject matter:

3. **Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.**

Claim 4 is limited to "the ear pad according to claim 3," as covered by Leight in view of Aceti. Neither Leight nor Aceti disclose, teach or suggest "walls that extend in a direction perpendicular to the center line of the basic body." While this shape is generally known in the art (see Santi figure 1, US Patent 3,097,643), there is no

motivation to modify Leight or Aceti. Furthermore, even if one were to modify Leight or Aceti to have walls extending in the manner taught by Santi, there is no evidence that the walls of Santi will deform in the same manner as claimed. To the contrary, Santi appears to depict that the walls taught therein retain their shape upon insertion into an auditory meatus. Thus, claim 4 is allowable over the cited prior art.

4. Claim 11 is allowed.

Claim 11 recites essentially the same subject matter as claim 4, and is allowable over the cited prior art for at least the same reasons.

Response to Arguments

Applicant's arguments with respect to claims 3-11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter F. Briney III whose telephone number is 571-272-7513. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WFB



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SUPERVISORY PATENT EXAMINER